APPENDIX A

INCONSISTENCIES IN SIPP DATA

The Census Bureau made significant changes to the SIPP in the 1996 panel to improve the accuracy of SIPP-based estimates. Key changes included:

- Using a single 4-year panel instead of overlapping 32 month panels
- Increasing sample sizes
- Oversampling households from areas with high poverty populations
- Introducing computer-assisted interviewing
- Changing questions concerning program participation

In comparing 1996 SIPP data with earlier estimates, we identified several key inconsistencies that could affect SIPP-based estimates of FSP participation. The source of these inconsistencies is not clear. They may have resulted from changes in sampling methods, sampling targets, interview questions, or data processing. Indeed, it is unclear whether these changes actually improved or decreased accuracy.

In this appendix, we present our analysis of SIPP discrepancies to make other users aware of the differences, not necessarily to provide evidence about the problems' causes. We summarize three key inconsistencies found in the SIPP: (1) changes in the proportion of adults among FSP participants, (2) changes in FSP participation volatility, and (3) changes in the number of new entrant FSP households with earnings.

The differences across panels suggest that the 1996 SIPP sample of FSP participants differed systematically from the other samples, but it is unclear which sample was more accurate. There are some problems that lead us to suspect the accuracy of the 1996 panel (discussed in Section A,

below). In general, users of the data should exercise caution when comparing FSP characteristics across panels.

A. CHANGES IN THE PROPORTION OF FSP ADULT PARTICIPANTS

Weighted estimates of the proportion of FSP adults shifted in the 1996 panel. In the 1990 through 1993 panels, the proportion of the FSP population that was age 18 or older generally was between 46 and 48 percent, consistent with FSPQC-based estimates. However, in the 1996 panel, the proportion that was of adult age increased to between 53 and 55 percent (Figure A.1).[23]

This shift in proportion was driven both by an increase in the number of adult FSP participants and a decrease in the number of child participants (Figure A.2). Between the end of the 1993 panel and the start of the 1996 panel, the number of adults increased by between 500,000 and 1 million per month, while the number of children decreased by about 2 million per month (Table A.1).[24] At the same time, the total number of FSP participants decreased by about 1.5 million per month.[25]

[23] Similar trends are observed in unweighted data. The unweighted proportion of the caseload that is adult averaged 47.3 in the last six months of the 1993 panel and 51.4 in the first six months of the 1996 panel.

[24] A similar inconsistency is identified in data on Aid to Families with Dependent Children/Temporary Assistance for Needy Family (AFDC/TANF) recipients. According to administrative data, the percentage of adult AFDC recipients was 32.6 percent, 31.9 percent, and 31.4 percent in 1994, 1995, and 1996, respectively. In the 1996 SIPP panel, AFDC/TANF the level of adult participants was approximately 38 percent for most of the 1996 panel (Figure A.3). However, unlike estimates of the FSP adult proportion, the estimate of the AFDC/TANF adult proportion fell back to about 28 percent in late 1998.

[25] Administrative data show that the caseload decreased by less than 300,000 during the same period.

FIGURE A.1

PROPORTION OF FSP PARTICIPANTS THAT IS ADULT AGE 18 OR OLDER

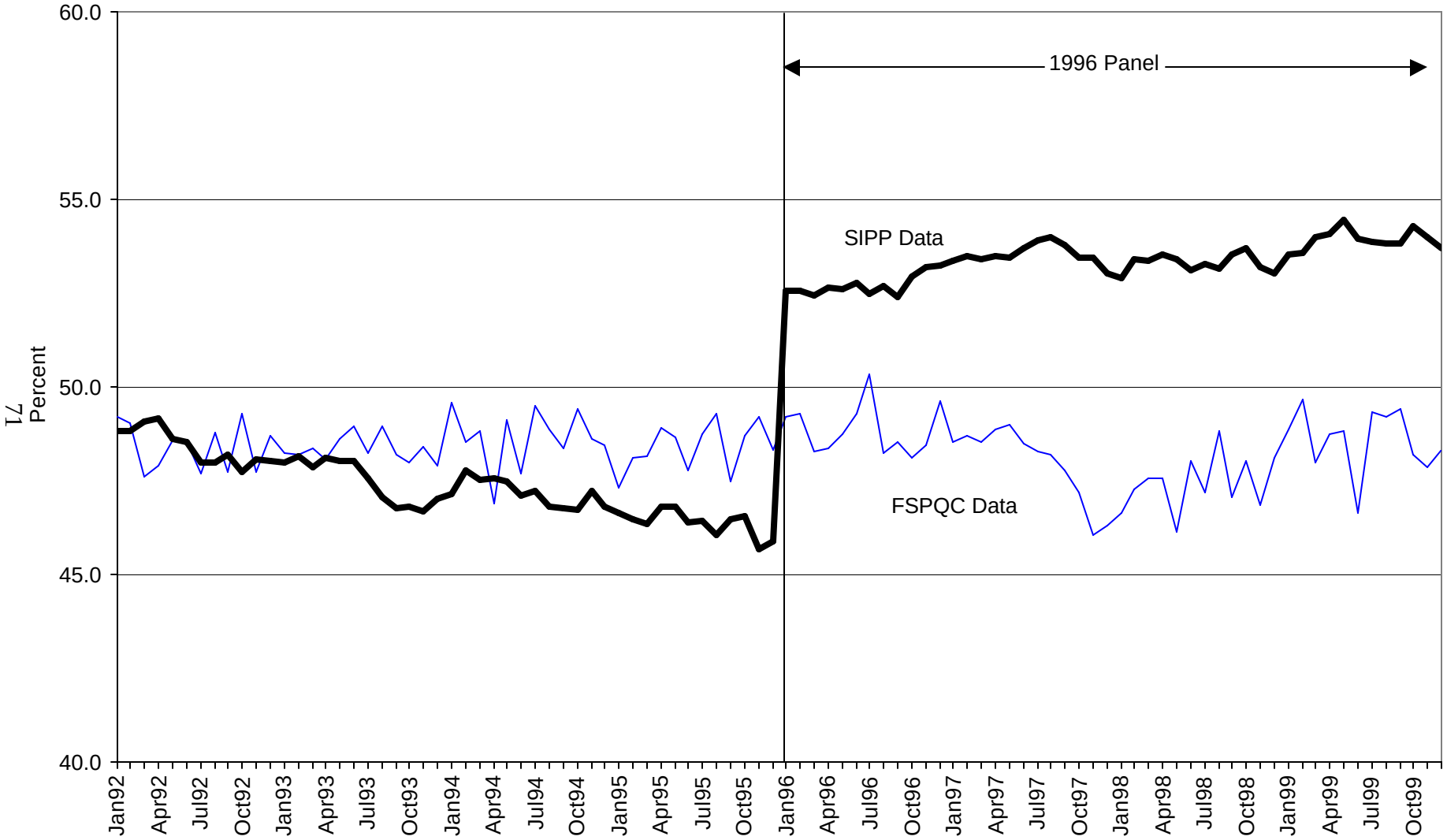


FIGURE A.2

ADULT AND CHILD FSP PARTICIPANTS IN SIPP

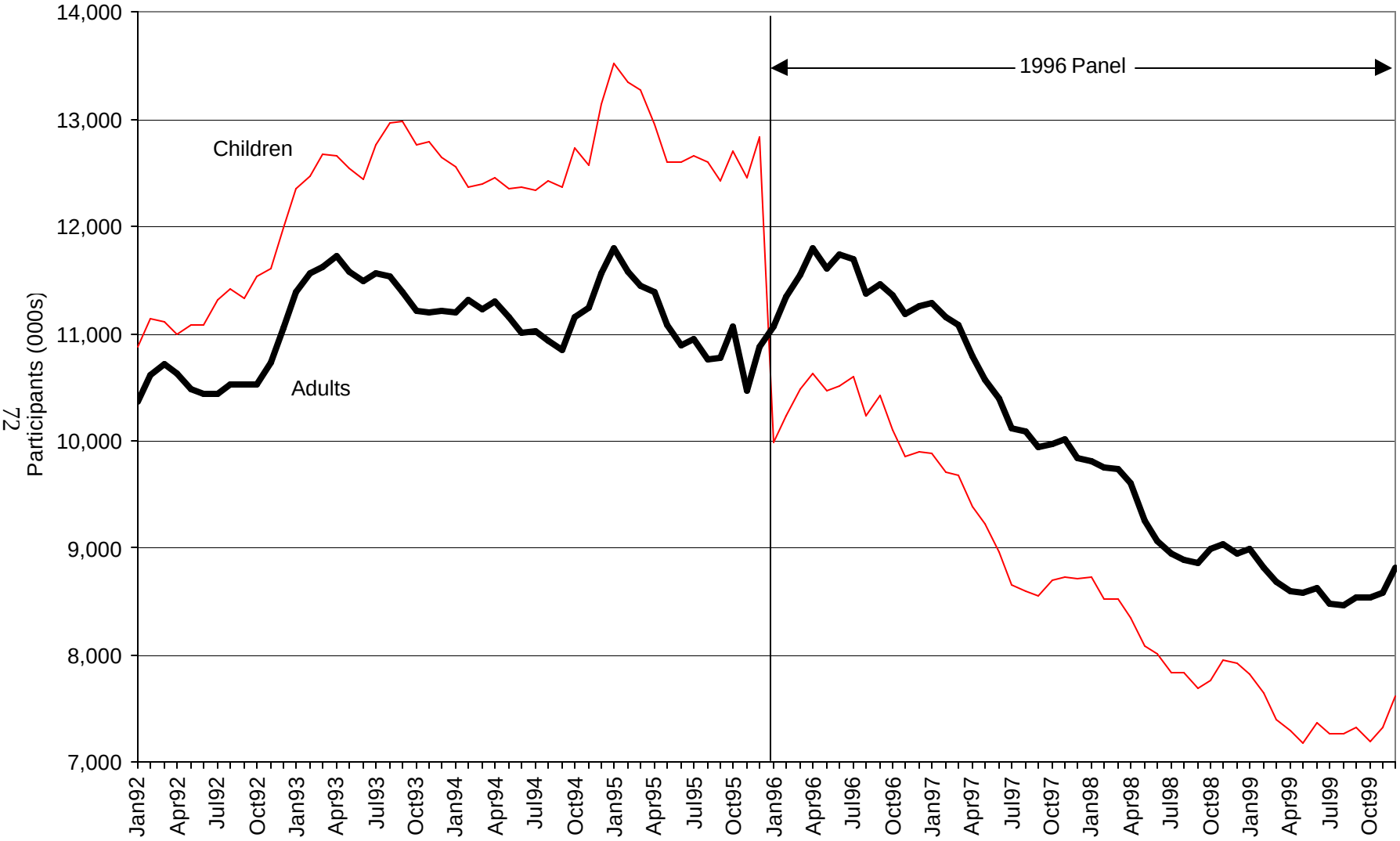


TABLE A.1

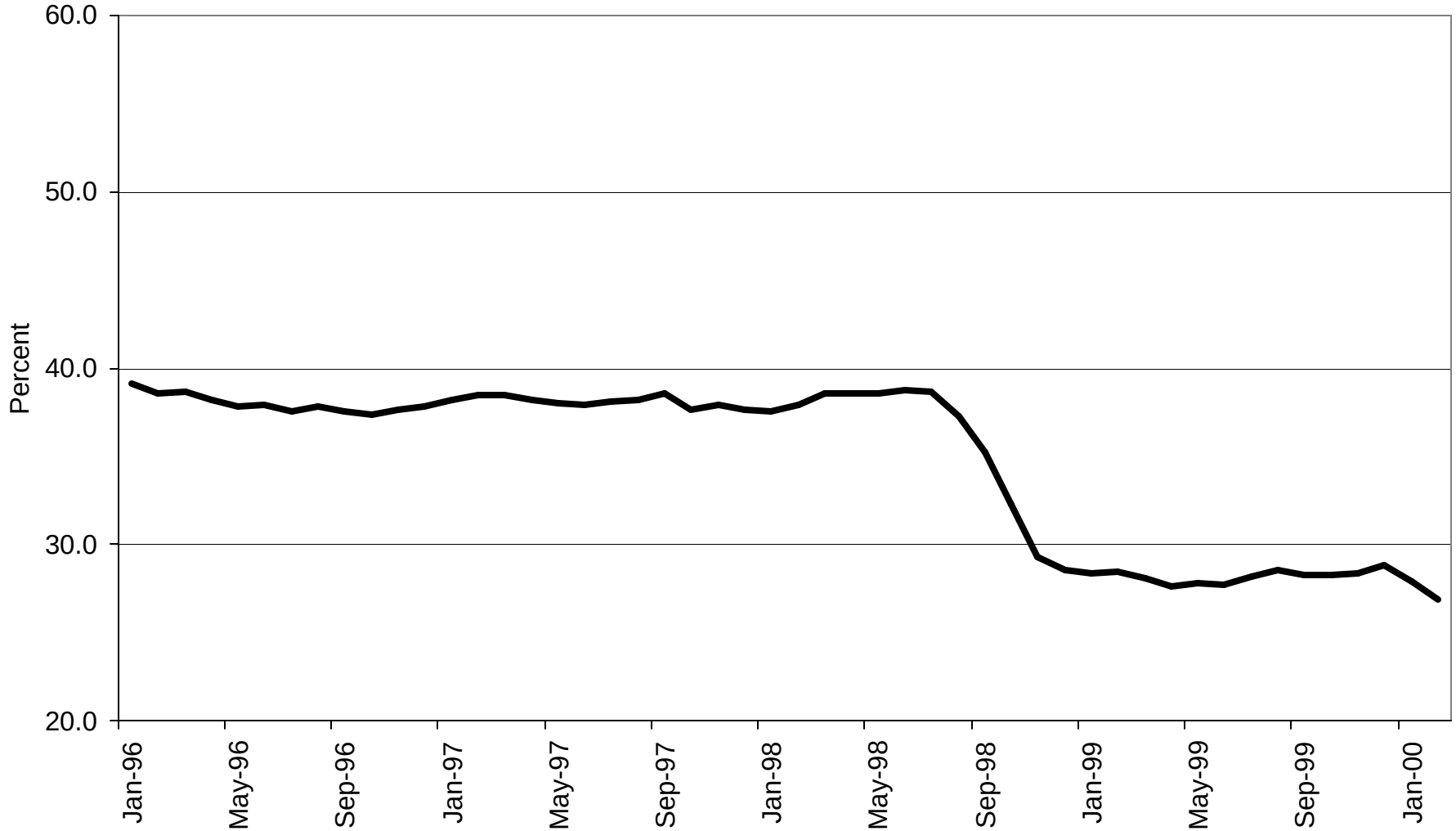
MONTHLY SIPP-BASED FSP ESTIMATES,
AUGUST 1995 – MAY 1996

Month	Total U.S. Population (000s)	Individuals with Food Stamps (000s)	Adults with Food Stamps (000s)	Children with Food Stamps (000s)	Percent of Total Population with Food Stamps	Percent of Food Stamp Recipients Adult	Percent of Food Stamp Recipients Children
1993 Panel							
August 1995	263,122	23,358	10,757	12,601	8.9	46.1	53.9
September 1995	263,281	23,213	10,779	12,434	8.8	46.4	53.6
October 1995	263,556	23,769	11,065	12,704	9.0	46.6	53.4
November 1995	263,657	22,921	10,464	12,457	8.7	45.7	54.3
December 1995	263,915	23,704	10,871	12,832	9.0	45.9	54.1
1996 Panel							
January 1996	263,864	21,053	11,065	9,988	8.0	52.6	47.4
February 1996	264,058	21,583	11,345	10,238	8.2	52.6	47.4
March 1996	264,254	22,039	11,550	10,489	8.3	52.4	47.6
April 1996	264,426	22,423	11,802	10,622	8.5	52.6	47.4
May 1996	264,617	22,070	11,605	10,465	8.3	52.6	47.4
Average							
Aug – Dec 95	263,506	23,393	10,787	12,606	8.9	46.1	53.9
Jan – May 96	264,244	21,834	11,473	10,360	8.3	52.6	47.4
Difference	+738	-1,559	+686	-2,245	-0.6	+6.4	-6.4

SOURCE: 1993 and 1996 SIPP panels.

FIGURE A.3

PERCENT OF AFDC/TANF RECIPIENTS THAT IS AGE 18 OR OLDER



The change in the adult FSP proportion appears to have been driven partially by errors in SIPP processing. In the 1996 panel, there was a sharp increase in the number of households with children in which one or more adults were covered by food stamps, but the children of those adults were not covered. Among households with children and with adults covered by food stamps, 87.7 percent (unweighted) had all children covered by food stamps before the 1996 panel (Table A.2). That proportion fell to 81.6 percent in the 1996 panel, with a concurrent increase in both the proportion of households in which some but not all children were covered and in which no children were covered.

The cause of this change in coverage is unknown. We speculate that in processing the 1996 panel of SIPP data, algorithms used to assign FSP status to children under 15 were not working as intended.

If this is the case, then a basic algorithm to impute FSP participation among children could be used to improve FSP-based estimates in the 1996 panel. We constructed a simple algorithm to assign FSP coverage to children.[26] In households where a parent was covered by food stamps, we assigned food stamp coverage to all of their children not already flagged as being covered. Applying this algorithm to all panels, we saw a small increase in the number of children covered in the pre-1996 panels and a large increase in the 1996 panel, bringing all panels to about the same proportions (Table A.3). Pre-1996 estimates of the proportion of FSP households with children in which all children were covered increase from 87.7 percent to 91.8 percent, and 1996-based estimates increased from 81.6 percent to 91.9 percent. This algorithm likely over-corrected for the problem—as reflected in the pre-1996 data—because there may have been

[26] This algorithm was not used in constructing estimates of replacement and exit rates in the body of this report.

TABLE A.2

ADULT AND CHILD FSP COVERAGE IN THE SIPP

	Percent of All Households with Children and with Some or All Adults Covered by FSP					
	Unweighted			Weighted		
	All Children Covered	Some But Not All Children Covered	All Children Not Covered	All Children Covered	Some But Not All Children Covered	All Children Not Covered
1992 and 1993 Panels						
1992	87.6	8.5	4.0	88.2	8.1	3.7
1993	88.3	7.7	4.0	89.0	7.4	3.6
1994	88.0	7.5	4.4	89.3	7.0	3.8
1995	86.9	7.3	5.9	88.6	6.7	4.7
1996 Panel						
1996	82.0	9.3	8.7	83.4	8.3	8.3
1997	81.4	9.2	9.5	81.6	8.9	9.5
1998	81.4	9.7	8.9	82.3	9.1	8.7
1999	81.6	8.4	10.0	83.0	8.0	9.0
Average						
1992-1995	87.7	7.7	4.6	88.8	7.3	3.9
1996-1999	81.6	9.2	9.3	82.5	8.6	8.9

SOURCE: 1992, 1993, and 1996 SIPP Panels.

TABLE A.3

ADULT AND CHILD FSP COVERAGE IN THE SIPP REVISED
WITH IMPUTED FSP COVERAGE FOR CHILDREN

	Percent of All Households with Children and with Some or All Adults Covered by FSP					
	Unweighted			Weighted		
	All Children Covered	Some But Not All Children Covered	All Children Not Covered	All Children Covered	Some But Not All Children Covered	All Children Not Covered
1992 and 1993 Panels						
1992	91.9	5.2	3.0	92.4	4.9	2.7
1993	92.4	4.8	2.8	93.2	4.3	2.5
1994	91.8	5.0	3.2	93.0	4.4	2.6
1995	91.0	4.8	4.2	92.3	4.2	3.5
1996 Panel						
1996	91.7	4.9	3.4	92.1	4.6	3.3
1997	91.8	4.5	3.7	92.3	4.2	3.5
1998	91.9	4.7	3.4	93.0	4.0	2.9
1999	92.0	3.8	4.1	93.1	3.3	3.6
Average						
1992-1995	91.8	4.9	3.3	92.7	4.5	2.8
1996-1999	91.9	4.5	3.7	92.6	4.0	3.3

SOURCE: 1992, 1993, and 1996 SIPP Panels.

some circumstances in which children living with parents covered by the FSP were not themselves covered by the FSP.

Problems with FSP coverage flags for children in the 1996 panel do not explain the entire shift in the FSP adult proportion. When we examined the proportion of FSP adult participants after implementing our imputation algorithm, the proportion in 1996 was between 50 and 52 percent, still several percentage points higher than in earlier SIPP panels or in FSPQC data (Figure A.4).

The remainder of the shift in the adult proportion likely resulted from differences in the sample of individuals reporting FSP participation between the pre-1996 and 1996 panels. This can be seen by looking at the unweighted proportion of adults in the SIPP (Table A.4). These differences may reflect changes in the ability of the 1996 SIPP sample to capture FSP participants, or changes in the way that SIPP sample members report FSP participation. If the problem is driven by a different sample, the SIPP weights (which are not controlled to FSP targets) do not correct for the oversample of adult FSP participants. Users looking to correct for these differences could consider revising the SIPP weights to better control for FSP characteristics.

B. CHANGES IN FSP VOLATILITY

In examining patterns of entry and exit, we discovered that the FSP sample in the 1996 panel was significantly more volatile than those of earlier panels. Replacement and exit rates were uniformly higher by about two percentage points in the 1996 panel (Figures A.5 and A.6).[27]

[27] Replacement rates are defined as the number of new entrants in a given month divided by the previous month's caseload; exit rates are defined as the number of exiters in a given month divided by the previous month's caseload. See full report for details of how these rates are computed in SIPP and FSPQC.

It is unclear what caused the increase in volatility. However, the fact that the 1996 SIPP-based estimates of replacement and exit rates were more in line with FSPQC-based estimates of those rates leads us to suspect that the change constituted an improvement in the data. Indeed, it may be the case that changes to the 1996 panel estimates, such as the use of computer-assisted interviewing, could capture more program exits and entries each month. This is just speculation, however; the real cause of the increase in volatility is unknown.

C. CHANGES IN NEW ENTRANT HOUSEHOLDS WITH EARNINGS

There is some evidence that the sample of FSP participants in the 1996 SIPP panel differed systematically in terms of earnings. In pre-1996 panels, the proportion of new entrant households that had earnings generally was between 19 and 21 percent, while in the 1996 panel, the proportion was between 24 and 28 percent. This may indicate a difference in sample, but it may also reflect a real phenomenon. In the pre-1996 panels, the proportion of new entrant households with earnings was trending upward over time (Figure A.7). This trend could have peaked in early 1996 and leveled off. However, given the other evidence of differences in the SIPP sample, we must also consider the possibility that the 1996 sample included more new entrant households with earnings.

FIGURE A.4

PROPORTION OF FSP PARTICIPANTS THAT IS ADULT AGE 18 OR OLDER
ORIGINAL VS. REVISED SIPP ESTIMATES

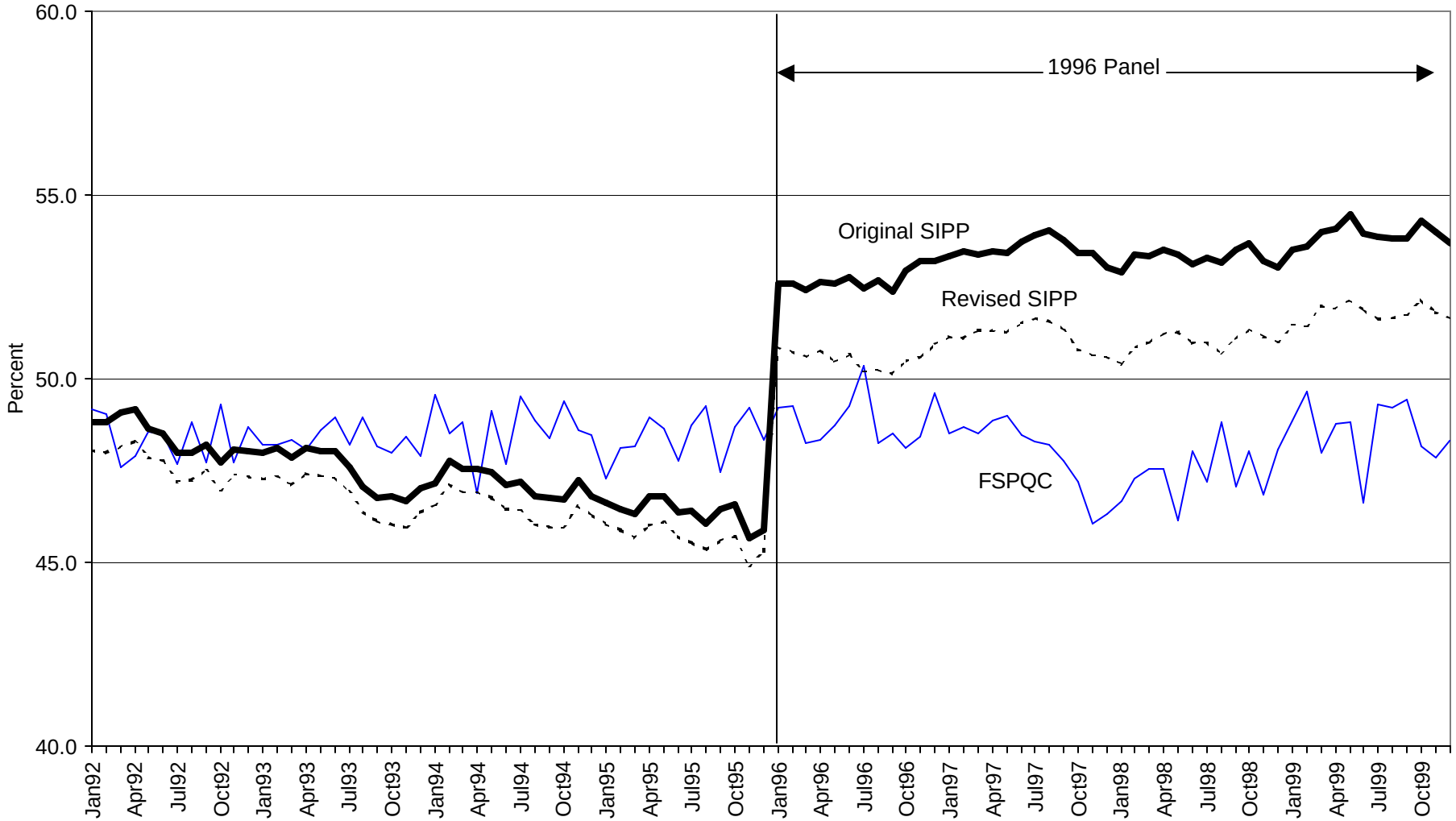


TABLE A.4

PROPORTION OF ADULTS (18 OR OLDER)

	Percent of FSP that is Adult				
	SIPP, Unadjusted		SIPP, Adjusted		
	SIPP Unweighted	SIPP Weighted	SIPP Unweighted	SIPP Weighted	FSPQC
1992	47.0	48.4	46.2	47.6	48.4
1993	46.6	47.5	45.9	46.8	48.3
1994	47.1	47.2	46.4	46.5	48.6
1995	47.1	46.4	46.4	45.6	48.4
1996	51.7	52.7	49.6	50.5	48.8
1997	52.4	53.5	50.1	51.2	48.0
1998	53.3	53.3	51.0	51.0	47.4
1999	54.9	53.9	52.6	51.8	48.6
Average					
1992-1995	46.9	47.4	46.2	46.6	48.4
1996-1999	53.0	53.4	50.8	51.1	48.2

FIGURE A.5

REPLACEMENT RATES
1990 THROUGH 1999

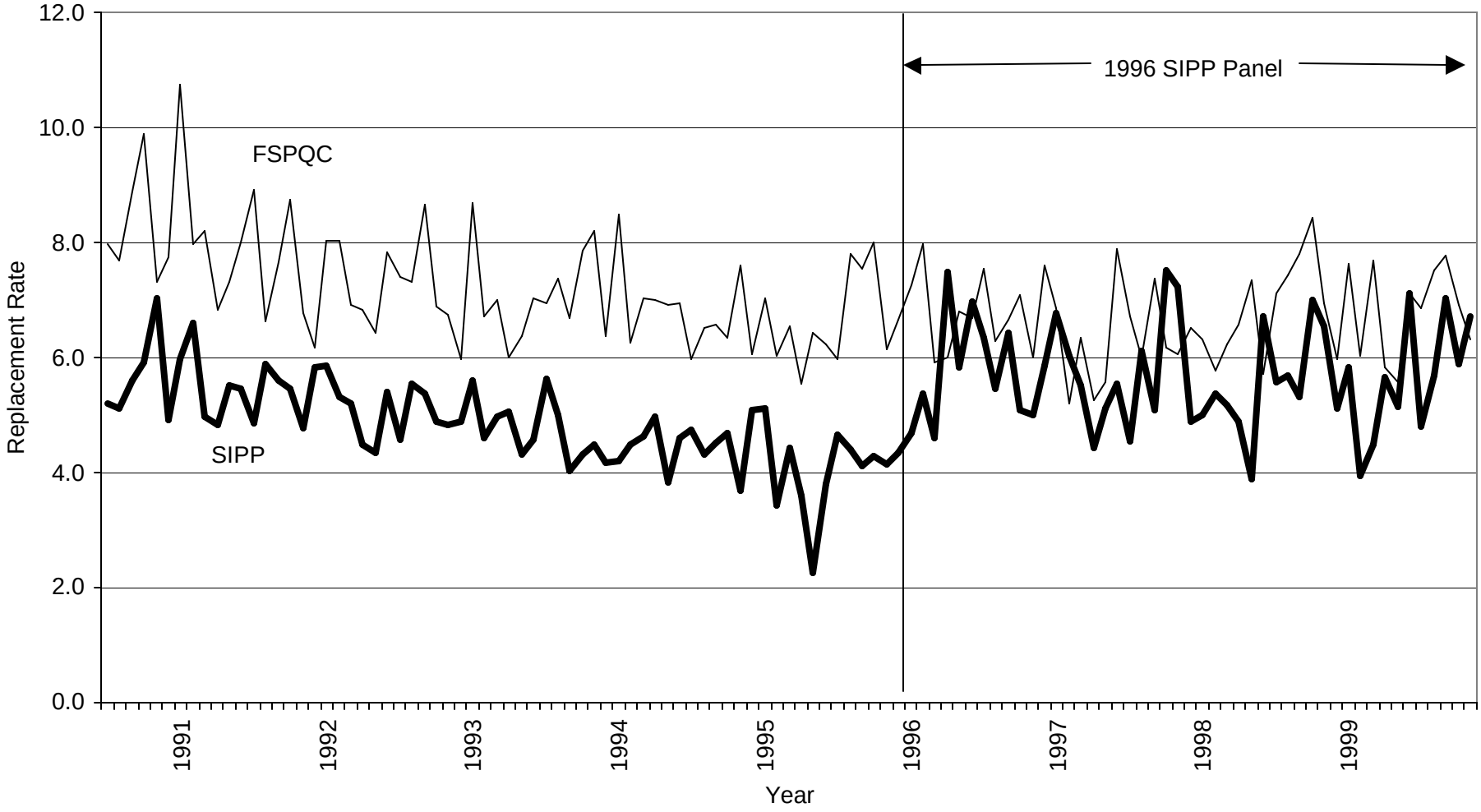


FIGURE A.6

EXIT RATES
1990 THROUGH 1999

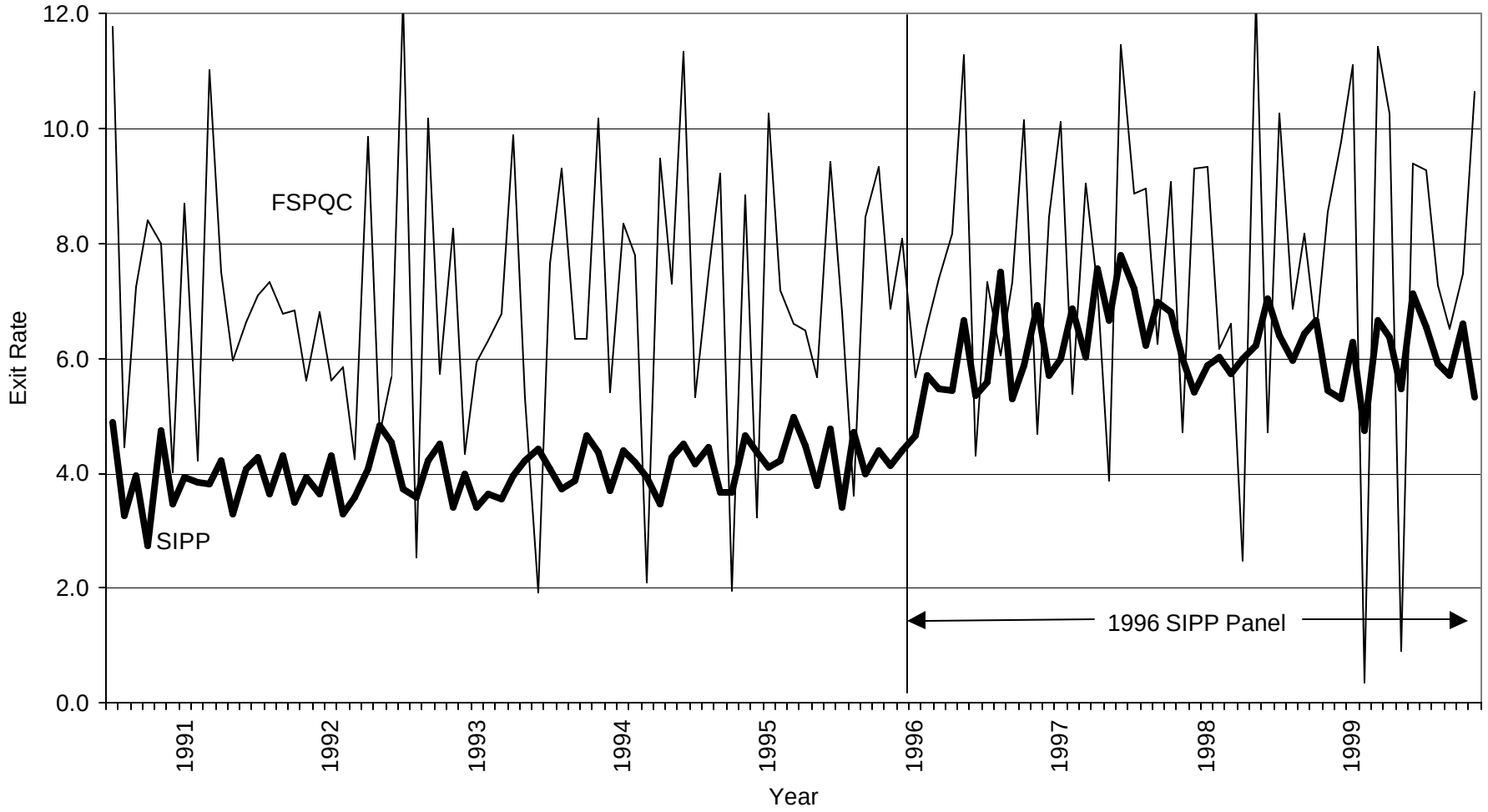


FIGURE A.7

NEW ENTRANT FSP HOUSEHOLDS WITH EARNINGS
SIPP, 1990 THROUGH 1999

D. CONCLUSIONS

FSP-based estimates derived from the 1996 SIPP panel were inconsistent with estimates of earlier panels. The 1996 SIPP panel estimates may have had an error in the way in which child FSP coverage was assigned. Children of FSP participants were flagged as being covered by food stamps at a much lower rate than in earlier panels. In addition, the sample of FSP participants appeared to be systematically different even after correcting for problems with coverage flags. The sample had disproportionate shares of adult and child participants, and participants entered and exited the FSP at higher rates relative to earlier panels. Furthermore, it may be the case that the sample included more FSP households with earnings.

The differences in the 1996 panel suggest that users should exercise caution when estimating FSP characteristics, particularly when comparing changes in FSP characteristics between the pre-1996 and 1996 panels. Additionally, if age is an important analysis variable, users should consider imputing child participation based on the parents' participation. Users looking at a limited number of characteristics in addition to age may consider adjusting the SIPP weights to account for the sampling differences.